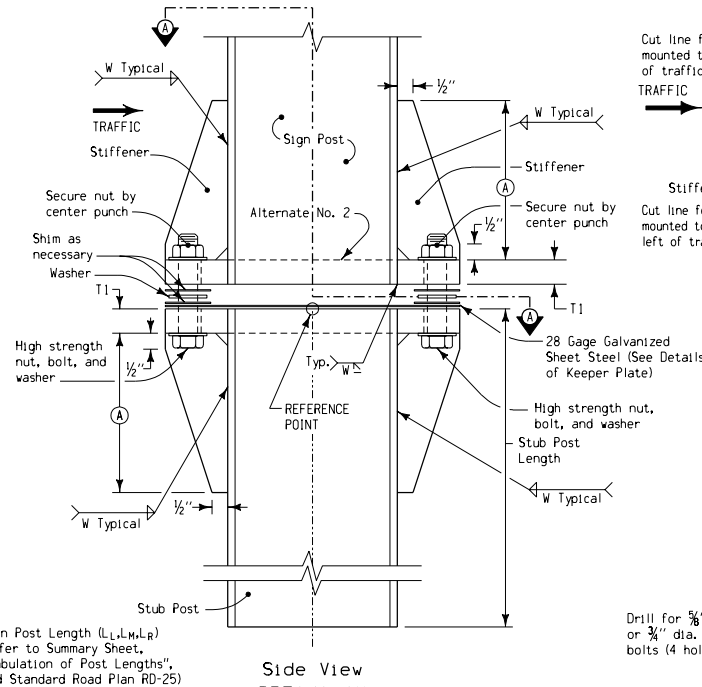
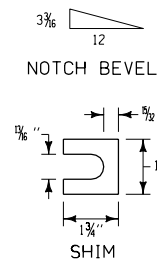


TYPICAL SIGN INSTALLATION

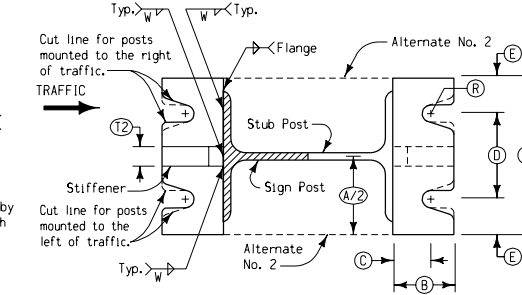


Side View
BREAKAWAY
BASE DETAILS

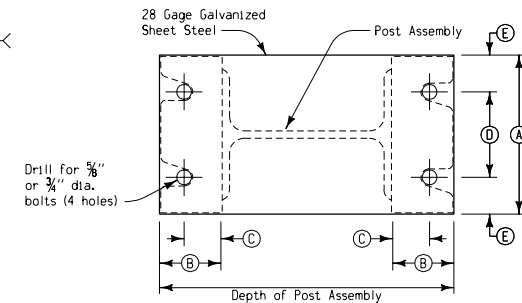
(W) Welds shall be continuous fillet welds and of a depth equal to the thickness of the flange for the post unless otherwise specified.



| POST DATA | |
|---|-------------|
| Post Size | Stub Length |
| W 6 x 9 W 6 x 12 W 6 x 15 W 8 x 18 | 2'-6" |
| W 8 x 21 W 10 x 22 W 10 x 26 W 12 x 26 | 3'-0" |



Section A-A (Plan)
DETAILS OF BASE



DETAILS OF KEEPER PLATE

| BREAKAWAY BASE DATA | | | | | | | | | | |
|---|---|-----|--------|--------|--------|--------|------|------|------|------|
| Post Size | Bolt Size & Torque | (A) | (B) | (C) | (D) | (E) | (T1) | (T2) | (W) | (R) |
| W 6 x 9 W 6 x 12 W 6 x 15 W 8 x 18 | 5/8" dia. x 2 3/4" Torque = 37.50 ft. lbs. | 5" | 2" | 1 1/4" | 2 3/4" | 1 1/8" | 3/4" | 1/2" | 1/4" | 1/2" |
| W 8 x 21 W 10 x 22 W 10 x 26 W 12 x 26 | 3/4" dia. x 3 1/2" Torque = 62.50 ft. lbs. | 6 | 2 1/4" | 1 3/8" | 3 1/2" | 1 1/4" | 1" | 3/4" | 5/8" | 1/2" |

GENERAL NOTES:

Methods and materials for construction of "Breakaway Sign Posts" shall conform to current Standard and Supplemental Specifications for Signage. Current Standard and Supplemental Specifications for Steel Structures shall also apply to appropriate work, such as welding, high tensile strength bolts, bolt holes, bolt tension, etc.

The base plate notches shall be provided so that no metal projects beyond any face of the plate and the edges of the notches are smooth and true.

All parts and hardware for posts shall be galvanized after fabrication except as noted. All bearing surfaces of base plate assembly shall be smooth and free of beads or runs.

The sign post may be attached to the footing stub post when approved by the Engineer. Sign post shall be plumbed by installing necessary shims as indicated.

The Contractor shall furnish two shims each of 0.012" and 0.032" thickness (total of 4 per post). Shims shall be brass stock or strip conforming to ASTM B-36. Details are shown for signs to be installed to the right of through roadway traffic. All installations will be thus, unless specified otherwise. For a left side installation, the notches in the breakaway base plate would be beveled in opposite direction as that shown.

The price bid for "Breakaway Sign Post" shall be considered full compensation for fabrication and installation as indicated hereon.

NOTE:
Breakaway Base shall be fabricated by either of two methods.

ALTERNATE NUMBER 1 - Base plates (2 each), shall be welded to sides of sign post and stub post flanges.

ALTERNATE NUMBER 2 - Base plate (1 each), shall be welded to end of sign post and stub post by continuous fillet weld. When fully assembled, the bolt holes and notches in the stub post plate and the sign post plate shall be properly matched and aligned as indicated hereon.

BOLTING PROCEDURE-BASE:
Tighten all bolts to maximum with 12" to 15" wrench to bed washers and shims and to clean bolt threads. Loosen each bolt in turn and retighten in systematic order to exact torque specified. Do not overtighten.

High strength bolts, nuts and washers shall be installed in an ungalvanized condition. After installation, all exposed surfaces of the bolts, nuts and washers shall be give two coats of zinc rich paint.

Iowa Department of Transportation
Project Development Division

STANDARD ROAD PLAN RD-21A

REVISION: Change dimension to 4" on Typical Sign Installation detail.

APPROVED BY: *[Signature]* DESIGN METHODS ENGINEER

11-05-99

REVISION NO. 7

REVISION DATE 02-11-00

DETAILS OF BREAKAWAY SIGN POST